Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listings of Claims:

1. (canceled)

2. (currently amended) A ~~The~~ semiconductor die package ~~of Claim 1~~ comprising:

a semiconductor die;

a capsule enclosing said die;

a plurality of metal studs, each of said metal studs protruding from a bottom surface of said capsule, each of said metal studs having a flat bottom surface; and

a plurality of bonding wires, each of said bonding wires extending between a first bonding location on said die and a second bonding location adjacent an upper surface of one of said metal studs, said bonding wires and bonding locations being embedded within said capsule;

wherein said studs comprise a first metal, a layer of a second metal being formed on said flat bottom surfaces of said studs.

3. (original) The semiconductor die package of Claim 2 wherein said first metal is a copper alloy and said second metal comprises nickel.

4. (currently amended) A ~~The~~ semiconductor die package ~~of Claim 3~~ comprising:

a semiconductor die;

a capsule enclosing said die;

a plurality of metal studs, each of said metal studs protruding from a bottom surface of said capsule, each of said metal studs having a flat bottom surface; and

a plurality of bonding wires, each of said bonding wires extending between a first bonding location on said die and a second bonding location adjacent an upper surface of one of said metal studs, said bonding wires and bonding locations being embedded within said capsule;

SILICON VALLEY
PATENT GROUP LLP
50 Mission College Blvd
Suite 360
Santa Clara, CA 95054
(408) 982-8200
FAX (408) 982-8210

wherein said studs comprise a first metal, a layer of a second metal being formed on said flat bottom surfaces of said studs, wherein said first metal is a copper alloy and wherein said second metal comprises Ni/Pd/Au.

5. (currently amended) A ~~The~~ semiconductor die package ~~of Claim 1~~ comprising:

a semiconductor die;

a capsule enclosing said die;

a plurality of metal studs, each of said metal studs protruding from a bottom surface of said capsule, each of said metal studs having a flat bottom surface; and

a plurality of bonding wires, each of said bonding wires extending between a first bonding location on said die and a second bonding location adjacent an upper surface of one of said metal studs, said bonding wires and bonding locations being embedded within said capsule;

wherein lateral surfaces of the portions of said studs that protrude from said bottom surface of said capsule are beveled.

6. (currently amended) The semiconductor die package of Claim 2 ~~1~~ comprising a second layer of said second metal formed on said upper surface of each of said studs.

7. (currently amended) The semiconductor die package of Claim 2 ~~1~~ wherein said studs are arranged in a single row on at least one side of said die.

8. (currently amended) The semiconductor die package of Claim 2 ~~1~~ wherein said studs are arranged in a plurality of rows on at least one side of said die.

9. (currently amended) A ~~The~~ semiconductor die package ~~of Claim 1~~ comprising:

a semiconductor die;

a capsule enclosing said die;

a plurality of metal studs, each of said metal studs protruding from a bottom surface of said capsule, each of said metal studs having a flat bottom surface; and

a plurality of bonding wires, each of said bonding wires extending between a first bonding location on said die and a second bonding location adjacent an upper

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'ATENT GROUP LLP
50 Mission College Blvd
Suite 360
ianta Clara, CA 95054
(408) 982-8200
FAX (408) 982-8210

surface of one of said metal studs, said bonding wires and bonding locations being embedded within said capsule;

wherein said die rests on a layer of epoxy, a bottom surface of said layer of epoxy being exposed at a bottom of said package.

10. (currently amended) A ~~The~~ semiconductor die package ~~of Claim 1~~ comprising:

a semiconductor die;

a capsule enclosing said die;

a plurality of metal studs, each of said metal studs protruding from a bottom surface of said capsule, each of said metal studs having a flat bottom surface; and

a plurality of bonding wires, each of said bonding wires extending between a first bonding location on said die and a second bonding location adjacent an upper surface of one of said metal studs, said bonding wires and bonding locations being embedded within said capsule;

wherein said die rests on a layer of epoxy, said layer of epoxy being attached to a plated metal layer, a bottom surface of said plated metal layer being exposed at a bottom of said package.

11. (currently amended) The semiconductor die package of Claim 2 ~~1~~ comprising a die-attach pad, said semiconductor die being attached to said die-attach ~~die attach~~ pad.

12. (original) The semiconductor die package of Claim 11 wherein said die is attached to said die-attach pad by means of an epoxy layer and a plated metal layer.

13. (original) The semiconductor die package of Claim 11 comprising a metal layer plated on a bottom surface of said die-attach pad.

14. (original) The semiconductor die package of Claim 11 wherein said die-attach pad is of substantially the same thickness as the studs.

15. (original) The semiconductor die package of Claim 11 wherein said die-attach pad is thinner than said studs.

SILICON VALLEY
'ATENT GROUP LLP
50 Mission College Blvd
Suite 360
Santa Clara, CA 95054
(408) 982-8200
FAX (408) 982-8210

16. (currently amended) The semiconductor die package of Claim 15 wherein a bottom ~~top~~ surface of said die-attach pad is substantially coplanar with said bottom surface of said capsule.

17. (currently amended) The semiconductor die package of Claim 15 wherein said die-attach pad is approximately one-half as thick as said studs.

18. (original) The semiconductor die package of Claim 11 wherein a lateral dimension of said die-attach pad is smaller than a lateral dimension of said die.

19. (currently amended) A ~~The~~ semiconductor die package ~~of Claim 18~~ comprising:

a semiconductor die;

a die-attach pad, said semiconductor die being attached to said die-attach pad, a lateral dimension of said die-attach pad being smaller than a lateral dimension of said die;

a capsule enclosing said die;

a plurality of metal studs, each of said metal studs protruding from a bottom surface of said capsule, each of said metal studs having a flat bottom surface; and

a plurality of bonding wires, each of said bonding wires extending between a first bonding location on said die and a second bonding location adjacent an upper surface of one of said metal studs, said bonding wires and bonding locations being embedded within said capsule;

wherein said die is attached to said die-attach pad by means of an epoxy layer and a plated metal layer, said plated metal layer having a lateral dimension larger than said lateral dimension of said die.

20. (original) The semiconductor die package of Claim 19 wherein a portion of a lower surface of said plated metal layer is exposed.

21. (original) The semiconductor die package of Claim 11 wherein a cavity is formed in an upper surface of said die-attach pad, said die being positioned in said cavity.

22. (currently amended) A ~~The~~ semiconductor die package ~~of Claim 11~~ comprising:

SILICON VALLEY
'ATENT GROUP LLP
50 Mission College Blvd
Suite 360
Santa Clara, CA 95054
(408) 982-8200
FAX (408) 982-8210

a semiconductor die;

a die-attach pad, said semiconductor die being attached to said die-attach pad;

a capsule enclosing said die;

a plurality of metal studs, each of said metal studs protruding from a bottom surface of said capsule, each of said metal studs having a flat bottom surface; and

a plurality of bonding wires, each of said bonding wires extending between a first bonding location on said die and a second bonding location adjacent an upper surface of one of said metal studs, said bonding wires and bonding locations being embedded within said capsule;

wherein a moat is formed in an upper surface of said die-attach pad, said moat surrounding said die.

23. (currently amended) The semiconductor die package of Claim 11 comprising a plurality of semiconductor dice and a plurality of die-attach pads, each of said dice being mounted on one of said die-attach pads.~~24.~~

24. (original) The semiconductor die package of Claim 11 wherein said die-attach pad has a thicker portion and a thinner portion said thicker and thinner portions being connected by a graduated step on a bottom surface of said die-attach pad.

25. (original) The semiconductor die package of Claim 11 wherein said die-attach pad is slotted.

26. (currently amended) The semiconductor die package of Claim 2 ~~1~~ wherein said die is mounted on said studs.

27. (original) A semiconductor die package comprising:

a semiconductor die;

a capsule enclosing said die; and

a plurality of metal studs, each of said metal studs protruding from a bottom surface of said capsule, each of said metal studs having a flat bottom surface, said die being mounted on said studs by means for solder balls, each of said solder balls making an electrical connection between a location on said die and one of said studs, said solder balls being embedded within said capsule.

SILICON VALLEY
'ATENT GROUP LLP
50 Mission College Blvd
Suite 360
ianta Clara, CA 95054
(408) 982-8200
FAX (408) 982-8210

28. (original) The semiconductor die package of Claim 27 wherein some or all of said studs comprise a shelf portion, said solder balls being in contact with said shelf portions.

29. (currently amended) The semiconductor die package of Claim 27 further comprising a die-attach pad, said die being mounted on said die-attach ~~die-attached~~ pad by means of one or more solder balls.

30. (original) A process of fabricating a semiconductor die package comprising:

providing a metal sheet;

forming a first mask layer on a first side of said metal sheet:

partially etching said metal sheet through openings in said first mask layer;

attaching a semiconductor die to a location on said first side of said metal sheet;

applying a layer of a molding compound over said first side of said metal sheet;

forming a second mask layer on a second side of said metal sheet; and

partially etching said metal sheet through openings in said second mask layer to form a plurality of studs.

31. (original) The method of Claim 30 wherein forming a first mask layer comprises forming a photoresist layer and photolithographically patterning said photoresist layer.

32. (original) The method of Claim 30 wherein forming a second mask layer comprises plating a metal layer.

33. (new) The semiconductor die package of Claim 9 wherein a plane defined by said bottom surface of said layer of epoxy is located above a plane defined by said flat bottom surfaces of said metal studs.

34. (new) The semiconductor die package of Claim 33 wherein said bottom surface of said layer of epoxy is coplanar with a bottom surface of said capsule.

SILICON VALLEY
'ATENT GROUP LLP
50 Mission College Blvd
Suite 360
Santa Clara, CA 95054
(408) 982-8200
FAX (408) 982-8210

35. (new) The semiconductor die package of Claim 10 wherein a plane defined by said bottom surface of said plated metal layer is located above a plane defined by said flat bottom surfaces of said metal studs.

36. (new) The semiconductor die package of Claim 35 wherein said bottom surface of said plated metal layer is coplanar with a bottom surface of said capsule.

37. (new) The semiconductor die package of Claim 10 wherein a lateral dimension of said plated metal layer is greater than a lateral dimension of said die.

SILICON VALLEY
'ATENT GROUP LLP

50 Mission College Blvd
Suite 360
Santa Clara, CA 95054
(408) 982-8200
FAX (408) 982-8210